

Quick on the drawer



Creating extra storage space in the home is always a good thing. The easy-build chest of drawers described here could be used for any sort of storage you want, including workshop use

This project describes the construction of a three-drawer chest, with overall measurements of 616mm wide, 663mm high and 440mm deep – see fig 1. The carcass is made from 18mm plywood. The drawers are also made of plywood – 12mm thick for the sides and 6mm for the bottoms. Each drawer has a false front of 18mm plywood. The carcass components and the drawer sides are joined together using biscuits and adhesive. For smooth self-closing operation, a pair of bottom-fix runners is attached to each drawer.

Design details

The outside of the carcass and the false drawer fronts are painted, and then have decorative ash edgings attached with adhesive and brass panel pins.

This chest was sized to fit within an alcove. However, the dimensions can be modified, as can the number of drawers.



1 Cut all the carcass panels accurately to size on a table saw, or by hand with a panel saw



2 Prepare a total of about 12m of 18 x 8mm ash edging strips on the thicknesser



3 Mark the biscuit positions on the panels and clamp them together for accuracy



4 Use the slots on one component as a guide for cutting the slots in the other



5 Rout a 9 x 6mm rebate on the rear edge of each side panel to take the back panel



6 Start the assembly by biscuit-jointing one end of the bottom panel to a side panel



7 Glue and biscuit-joint the ends of the two top rails to the side panel from step 6



8 Add the second side panel to the carcass assembly, aligning the biscuits carefully



9 Use clamps to pull the carcass sides together squarely and attach the back panel



10 Glue and screw the four softwood bearers to the underside of the bottom panel



11 Prime and paint the carcass sides and top panel. Then start adding the ash lipping



12 Screw the lower part of each drawer runner to the carcass sides. Note the spacer strip



13 Invert the carcass on the top panel and drive screws into it through the top rails



14 Finish the carcass by gluing and pinning the mitred edge steps to its perimeter

DRAWER UNIT CUTTING LIST

All dimensions are in millimetres

Part	Qty	L	W	T
CARCASE (ply)				
Side panel	2	637	406	18
Bottom panel	1	400	564	18
Top panel	1	600	424	18
Back panel	1	604	562	6
Top rail	2	564	20	18
Bottom bearers (softwood)	4	150	33	33
CARCASE TRIMS (ash)				
Top panel edging	2	440	18	8
Top panel edging	2	616	18	8
Bottom pads	8	150	18	8
Bottom edging	2	406	18	8
Front side edging	2	645	18	8
Front edging	2	564	18	8
Bearers front edging	4	41	18	8
DRAWERS (ply)				
Drawer sides	6	518	159	12
Drawer sides	8	400	159	12
Drawer bottom	3	400	540	12
False fronts (drawers 1/3)	2	584	184	18
False front (drawer 2)	1	584	172	18
DRAWER TRIMS (ash)				
False front edging	8	584	18	8
Edging (drawers 1/3)	4	200	18	8
Edging (drawer 2)	2	188	18	8

Checking dimensions

The plywood used in this project is actually exterior-grade quality material, and had reasonably sound outer veneers. It is also much cheaper to buy than birch ply. The measurements given in the cutting list assume that the board thicknesses are precisely 6, 12 or 18mm. It is advisable to check the actual thickness of the stock you're using; for example, an 18mm nominal thickness could in practice be anywhere between 17 or 19mm. This matters when you're sizing edging and working out drawer dimensions, and when using bottom-fix drawer runner sets.

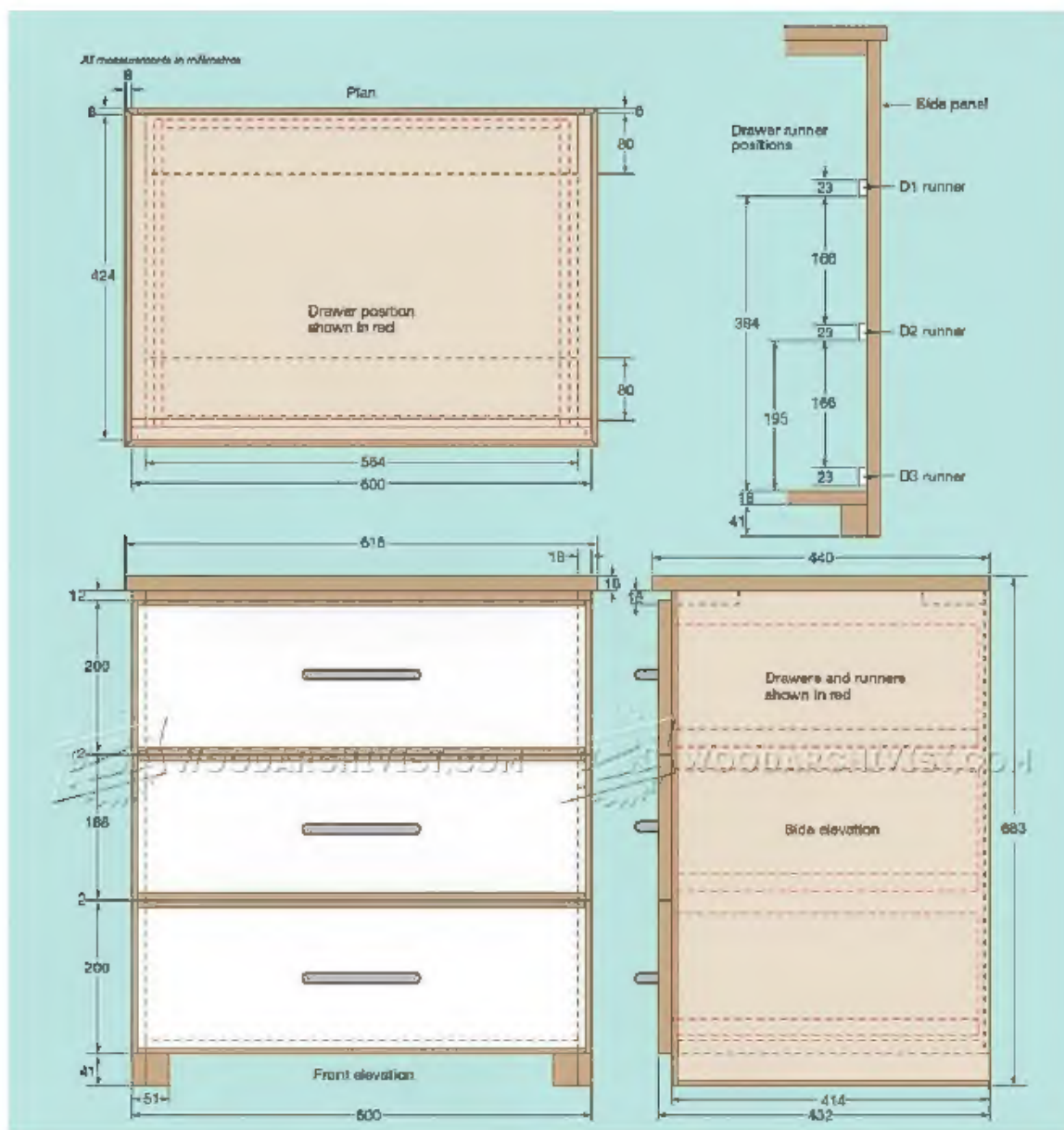
Preparing the carcass parts

Cut the carcass panels to size as per the cutting list. You can cut the basic stock using a circular saw against a guide, or a plunge saw. You can then accurately size the panels on a table saw, **photo 1**. Next, prepare a quantity of 18 x 8mm ash edging strips on the thicknesser, **photo 2**; you'll need somewhere in the region of 12m in all. Mark the positions of the biscuit joints on the carcass panels and cut size 20 biscuit slots as required, **photo 3**. Clamp the bottom panel to each side panel in turn to help align the slots, **photo 4**.

Next, the two side panels will each

require a 9 x 6mm rebate to be routed along the inside rear, **photo 5**, to take the back panel. Use a straight or rebate cutter in your router table to cut it.

Finally, cut four 150mm lengths of 33 x 33mm softwood to form the bottom bearers. Mark the positions for the bottom panel and the top rails on the insides of the side panels. Then use the bearers to ensure that the bottom panel is positioned at the correct level above the bottom edge of the side panels. Cut more biscuit slots to join the two top rails to the side panels, and dry-fit everything together at this stage to check alignment.



Assembling the carcass

Start the assembly by joining one end of the bottom panel to the side panel, using size 20 biscuits and adhesive, **photo 6**. Ensure that the front edge of each panel is aligned. Next, join one end of each top rail to the side panel, **photo 7**. The front edge of the top rail should be flush with the front edge of the side panel, while the rear edge of the rear top rail should line up with the cut rebate. Apply biscuits and adhesive to the joining surfaces and fit the second side panel, **photo 8**.

Cramp the assembly to pull the sides together, then attach the back panel with

20mm No 4 screws, or panel pins if you prefer, **photo 9**. Then attach the four bearers to the underside of the bottom panel, **photo 10**, using screws and adhesive.

Painting the carcass

The outside of the carcass can now be sanded smooth and painted, as can the prepared top panel. I used an acrylic finish, applied using a small paint roller. I started with two coats of white acrylic primer/undercoat to seal the board surface, followed by two coats of 'Old English White' satin finish acrylic top coat.

Adding the trims

Now you can return to the stack of decorative ash trim you prepared earlier. The lengths are cut to size to cover all the front edges of the carcass, and the bottom edge of each side panel. Take the measurements for each strip directly from the carcass for accuracy, allowing for the mitres where relevant, and then cut and label each strip to aid assembly. It's best to sand and varnish the strips at this stage, rather than trying to do it when they're in place on the carcass.

Attach all the strips using adhesive and 20mm brass panel pins, **photo 11**. It's



15 Cut all the drawer components to size from 12mm plywood and cut biscuit slots in each one



16 Assemble the three drawer boxes with adhesive and two size 0 biscuits per joint



17 Cramp each drawer box up so it's square, then glue and screw in the base panel



18 Attach the other part of the drawer runner set to each side of each drawer



19 Engage the drawer runner parts so you can slide each drawer into its recess



20 Cut the false fronts to size, prime and paint them and add the edging strips



21 Attach the lowest false front to its drawer box with screws through the handle holes



22 Repeat this process for the other false front panels, with 2mm spacers between them



23 Open each drawer and drive screws through the box into the false front. Then add the handle

advisable to pre-drill the holes for the panel pins using a 1.5mm drill. This avoids the risk of splits allows a more accurate alignment of the edging. The pins can be punched in and the holes filled, but I left mine flush as a decorative feature.

Fitting the drawer runners

The bottom-fix drawer runners used are supplied in pairs, and require an allowance of 12mm at each side, so the drawer width must be 24mm less than the inner dimension of the carcass. For this project the inner dimension is $600 - 36 = 564\text{mm}$; therefore the drawer width that's required is $564 - 24 = 540\text{mm}$.

Attach the appropriate parts of the runners to the inside of the side panels, **photo 12**. A temporary plywood spacer is a useful aid to placing them correctly and ensuring that they are parallel to each other.

Now you can attach the inverted carcass to the top panel by driving screws through the top rails, **photo 13**. Use 30mm No 8 screws so they don't pass right through the top panel.

Once that's done, you can edge the top

with ash strips as before, **photo 14**, mitring the corners neatly before sticking and pinning them on.

Making up the drawers

Cut the drawer components to size as per the cutting list, using 12mm plywood for the sides and 6mm for the bottoms. The sides are joined using two size 0 biscuits at each joint. Cut the matching slots, **photo 15**, insert the biscuits and assemble the drawer boxes, **photo 16**. Cramp the box sides and fix the bottoms using adhesive and 20mm No 4 screws, **photo 17**. Then drill four 4mm clearance holes through the front of each drawer box so you can attach the false front panels later.

Attach the other part of the drawer runners to each side of each drawer, **photo 18**, and insert the drawers in the carcass to test their fit, **photo 19**.

Make the false front panels from 18mm plywood, and paint them before attaching the edging. This is fixed as before with adhesive and panel pins, **photo 20**. Mark the handle position on each false front and drill clearance holes for the fixing screws.

Finishing the drawers

Fit the drawers in the carcass and attach the lowest false front to its drawer, **photo 21**. Make a temporary fixing by driving screws through the holes you made for the drawer handle. Repeat for the other false fronts, **photo 22**, using 2mm spacers between the drawers to give the necessary clearance.

Now you can open each drawer in turn and attach its false front permanently, **photo 23**, by driving four screws through the clearance holes you drilled earlier in the fronts of the drawer boxes. Finally, remove the temporary screws from the handle holes and attach the handle of your choice.

FURTHER INFORMATION

Biscuits:

- Trend Machinery & Cutting Tools
- 01923 249911
- www.trend-uk.com

Drawer runners (ref 13157)

- Screwfix
- 0500 414141
- www.screwfix.com